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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,119	04/16/2004	Keisuke Matsumoto	403043	7964

23548 7590 04/27/2006

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EXAMINER

STAHL, MICHAEL J

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 04/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/825,119

Applicant(s)

MATSUMOTO, KEISUKE

Examiner

Mike Stahl

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.  
4a) Of the above claim(s) 5 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-4 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/10/04, 4/16/04.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

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***Election***

Claim 5 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made without traverse in the reply filed on March 3, 2006.

***Information Disclosure Statement***

The citation form filed September 10, 2004 has been crossed out because the citation of the sole reference is incorrect. Specifically, the author of the reference is not Noguchi but Ratovelomanana et al. The examiner has considered the reference and provided the correct citation on the attached PTO-892 form (a copy of the reference is also included due to Office policy even though it was previously submitted by applicant). Applicant need not submit a supplemental IDS for this reference.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Nojima (US 2004/0001247).

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Claim 1: Nojima discloses an optical function device (see fig. 4) comprising: a first port (input to splitter 3), a second port (output of coupler 12), a first splitter 3 branching the first port to a first arm (lower path 3-10-11-14-12) and a second arm (upper path 3-4-5-12), a second splitter 12 branching the second port to the first and second arms, a first semiconductor optical amplifier (SOA) 11 disposed on the first arm, a second SOA 5 disposed on the second arm, and a phase control element 14 disposed between the first SOA 11 and the second splitter 12 on the first arm, wherein constant light ( $\lambda_{p1}$ ) is input from one of the first and second ports, and input signal light ( $\lambda_{p2}$ ) is input at a site (via coupler 10) between the first splitter 3 and the first SOA. It is noted that  $\lambda_{p2}$  carries the modulation of  $\lambda_s$  by the time it reaches coupler 10. See the description of fig. 1.

Claim 2: The fig. 4 device is used as a wavelength converter.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Sigogne et al. (US 6169824).

Claim 1: Sigogne discloses an optical function device (see fig. 6) comprising: a first port (near Ss), a second port (near Sc), a first splitter 28 branching the first port to a first arm (path through C1-A1-D1) and a second arm (path through C2-A2-D2), a second splitter 26 branching the second port to the first and second arms, a first semiconductor optical amplifier (SOA) A1 disposed on the first arm, a second SOA A2 disposed on the second arm, and a phase control element D1 disposed between the first SOA A1 and the second splitter 26 on the first arm, wherein constant light Sc is input from one of the first and second ports, and input signal light Se is input at a site (via coupler C1) between the first splitter 28 and the first SOA A1. It is also

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noted that in the fig. 7 embodiment, the input signal light is input at the other recited site, i.e. between the first SOA and the phase control element.

Claim 3: In addition to the parts identified above with respect to claim 1, the fig. 6 Sigogne device also includes a second phase control element **D2** disposed between the second SOA **A2** and the second splitter **26** on the second arm.

Claims 2 and 4: The fig. 6 device is used as a wavelength converter (see e.g. col. 7 ln. 44 – col. 8 ln. 7).


### *Conclusion*

The additional references listed on the attached PTO-892 form disclose subject matter relevant to this application.

Inquiries about this letter should be directed to Mike Stahl at 571-272-2360. Inquiries of a general or clerical nature (e.g., a request for a missing form or paper, etc.) should be directed to the technical support staff supervisor at 571-272-1626. Official correspondence which is eligible for submission by facsimile and which pertains to this application may be faxed to 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Questions about the Private PAIR system should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mike Stahl *MJS*  
Patent Examiner  
Art Unit 2874

April 17, 2006

  
Rodney Bovernick  
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